

AMENDMENTS TO THE CLAIMS

1. (Cancelled)
2. (Currently amended) The apparatus of claim 125, further comprising a backside heating device to emit heat towards a second side of the target area.
3. (Original) The apparatus of claim 2, wherein the backside heating device comprises at least one of a group consisting of a hotplate, a tungsten lamp, and a halogen lamp.
4. (Original) The apparatus of claim 3, wherein the backside heating device further comprises a plurality of heating zones, each heating zone capable of being independently controlled.
5. (Currently amended) The apparatus of claim 125, wherein the reflecting device is a plate-type reflector.
6. (Original) The apparatus of claim 5, further comprising:
a vertical axis substantially through the center of the apparatus; and
the plurality of reflecting zones being substantially symmetrical around the vertical axis.
7. (Original) The apparatus of claim 6, wherein the plurality of reflecting zones are concentric rings.
8. (Currently amended) The apparatus of claim 125, wherein each of the plurality of reflecting zones comprises at least one of a group consisting of aluminum, gold, stainless steel, and molybdenum.
9. (Currently amended) The apparatus of claim 125, wherein the flash lamp comprises a plasma-type flash lamp.
10. (Original) The apparatus of claim 9, wherein the plasma-type flash lamp comprises a Xenon lamp or a Mercury lamp.
11. (Currently amended) The apparatus of claim 125, wherein the target area is adapted to receive a substrate.
12. (Original) The apparatus of claim 11, wherein the substrate comprises a 300-mm semiconductor wafer.
13. (Cancelled)

14. (Currently amended) The method for flash lamp processing of claim 1326, wherein the reflecting device is a plate-type reflector that is substantially axis-symmetric around a vertical axis.

15. (Currently Amended) The method for flash lamp processing of claim 1326, further comprising:

heating a second surface of the substrate with a backside heating device to a pre-flash temperature prior to generating light rays from the flash lamp.

16. (Original) The method for flash lamp processing of claim 15, wherein the backside heating device comprises a plurality of heating zones, and the method further includes

independently controlling the heating zones based at least in part on reflectivity of portions of the substrate.

17. (Original) The method for flash lamp processing of claim 15, further comprising:

activating implanted ions in the first surface of the substrate by heating the second surface to a pre-flash temperature approximately at or below an ion diffusion temperature; and

heating the first surface of substrate to a temperature approximately between the ion diffusion temperature and a substrate melting temperature, said heating the first surface done, at least in part, by light rays generated from the flash lamp.

18. (Original) The method for flash lamp processing of claim 17, wherein the light rays generated from the flash lamp heat the first surface of the substrate to a temperature just below the substrate melting temperature.

19. (Original) The method for flash lamp processing of claim 17, wherein the first surface of the substrate is above the ion diffusion temperature for a time period of approximately three milliseconds or less.

20. (Cancelled)

21. (Original) The system of claim 2027, wherein the substrate comprises a semiconductor wafer.

22. (Original) The system of claim 2027, wherein the pre-flash processing device comprises one of a group consisting of an ion implantation device, a metal deposition device, a low-k deposition device, and a high-k deposition device.

23. (Original) The system of claim 2027, wherein the flash lamp reactor further comprises:

a backside heating device, to emit heat towards a second side of the target area.

24. (Original) The system of claim 23, wherein the backside heating device includes a plurality of heating zones, each heating zone capable of being independently controlled.
25. (New) An apparatus comprising:
a target area;
a flash lamp to produce light rays; and
a reflecting device having a first reflective zone with a first reflectivity and a second reflecting zone with a second reflectivity that is different from the first reflectivity, the reflecting device adapted to receive at least a portion of the light rays and to reflect at least some of the received light rays substantially towards a first side of the target area.
26. (New) A method for flash lamp processing comprising:
generating light rays from a flash lamp; and
reflecting a first portion of the light rays with a first reflecting zone of a reflecting device, the first reflecting zone having a first reflectivity; and
reflecting a second portion of the light rays with a second reflecting zone of the reflecting device, the second reflecting zone having a second reflectivity that is different from the first reflectivity.
27. (New) A system comprising:
a pre-flash processing device adapted to process a substrate;
a flash lamp reactor including
a target area adapted to receive the substrate such that the first surface of the substrate corresponds with a first side of the target area;
a first flash lamp adapted to produce first light rays; and
a reflecting device having a first reflecting zone with a first reflectivity and a second reflecting zone with a second reflectivity that is different from the first reflectivity, the reflecting device adapted to receive at least a portion of the first light rays and to reflect at least some of the first light rays substantially towards the first side of the target area; and
a transfer mechanism adapted to transfer the substrate from the pre-flash processing device to the flash lamp reactor.